MULTIPLE USE IN ACTION

THE 1960 YEARBOOK
U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
INTERMOUNTAIN REGION

FOREWORD

June 12, 1960, marked enactment of legislation directing that the national forests be managed on a multiple-use, sustained-yield basis. To United States citizens, whether or not they are directly concerned with management and protection of national forest resources, the act is highly significant, even though it has always been the policy to manage the national forests on a multiple-use basis. Therefore, we hope with words and pictures in this booklet to describe the meaning of multiple use, and to portray it for you in action as practiced in today's national forests.

Within a multiple-use management unit such as a ranger district or a national forest, most areas of forest and rangeland support two or more uses, but some areas may be devoted to a single use. It is the harmonized and well coordinated fabric woven from a combination of uses which completes a multiple-use pattern.

The destructive forces of soil erosion, fire, insects, diseases, and rodents are serious deterrents to multiple-use management. Thus, adequate control of these enemies which affect all forest lands, public, state, or private, becomes an integral part of all multiple-use planning and management.

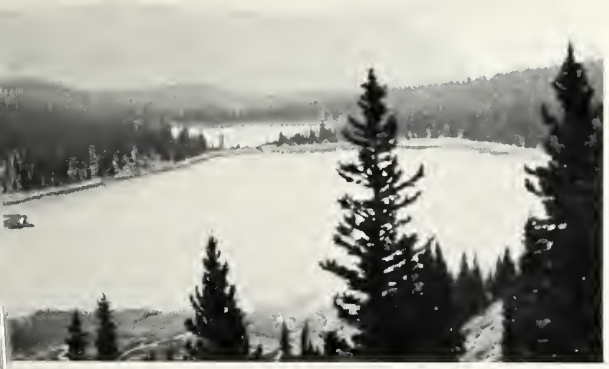
Successful multiple-use management not only requires well designed plans and coordination between different types of uses to render them compatible, but depends on the cooperation of users and land managers. Frequently, therefore, we in the U.S. Forest Service have the opportunity to work jointly with other federal and state agencies and private land resource managers to perform the complete task that is inherent in multiple-use land management.

Floyd Iverson

Regional Forester

TABLE OF CONTENTS

A PICTURE STORY
OF
MULTIPLE USE IN ACTION



In the Uinta River watershed
Ashley National Forest

"Vast upland forests, lands of many uses."

On a remote national forest area such as the Uinta River watershed where the resources except for water and forage are scarcely tapped, multiple-use planning is highly important. Two factors make it so: first, the gateway to the area is within a few hours' drive of the Intermountain metropolis, Salt Lake City; second, its vast timber and recreation potential can add materially to the economy and the enjoyment of present and future generations.

Some important factors that govern multiple-use planning in this and similar areas are locations of roads and timber sales and possible recreation sites. To provide for maximum outdoor enjoyment in these "water influence zones," relatively stable water levels should be maintained, and proposed camping and picnicking sites must be laid out before any timber is harvested. Grazing and timber harvesting will be carried out with the goal of protecting soils from erosion, maintaining wildlife habitat, sustained timber production, and preserving the natural beauty of the shorelines, mountain meadows, and the forest itself.

"Contour trenches – a first step in watershed restoration on steep slopes."

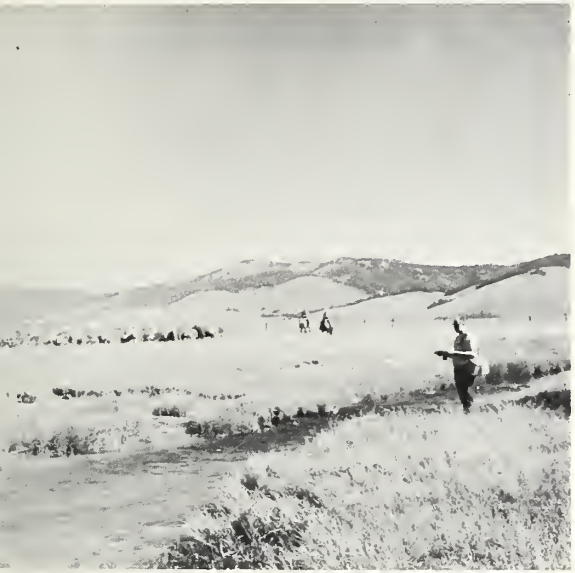
A disastrous fire on the Boise watershed followed by floods late in the summer of 1959, caused about $100,000 damage in Boise. Erosion control work which followed was a cooperative project by representatives of the City of Boise, Ada County, the State of Idaho, the Soil Conservation Service, the Bureau of Land Management, and the Forest Service since the fire burned on private, state, public domain, and national forest lands.

Ordinarily one thinks of a national forest as tree-covered, but many forests in the Intermountain West contain large areas of foothill zones valuable for big game winter forage, livestock spring-fall forage, and for hunting and other uses. Of higher importance in many areas, these foothill zones rise directly from communities and cities, making them most valuable for watersheds. Thus, the major multiple-use considerations are to keep soil disturbance at a minimum, maintain satisfactory forage cover for big game and livestock, and prevent erosion and floods on slopes where the vegetative cover has been damaged or destroyed by overgrazing or fire.

At the flood source

Observing watershed restoration work
Boise National Forest

Fishing and grazing
Challis National Forest



"For business or pleasure – the resources are there under multiple-use management."

Characteristic of the Sawtooth Mountain Region are the broad upland valleys of the Stanley Basin. These valleys contain the headwaters of the famous Salmon River and are highly popular for varied outdoor recreation. In such settings, multiple uses thrive: livestock grazing, some timber harvesting, hunting, fishing, and mining. The Sawtooth Mountain Region is said to be one of the most heavily mineralized in Idaho.

Where soil, water, timber, vegetation, and scenery combine to make an area highly popular, multiple-use management is extremely complex. Grazing, timbering, and other uses are harmonized by application of multiple-use planning, which also considers construction of roads and other improvements devoted to better management and increased enjoyment of all the resources.

"Some questions will be answered. How are steep slopes logged with maximum protection to the watershed, the wildlife habitat, and provision for the new timber crop?"

Multiple-use management on timber sale areas is intimately concerned with a variety of activities. Among other considerations the wildlife and fishing aspects of management are coordinated with agencies responsible for maintaining and improving the fish and game resources. Powerlines are routed to avoid camping, picnicking, and scenic areas as well as choice timber-growing sites.

In timber harvesting operations some of the many items to be considered are: maintaining clear stream channels in building logging roads and in felling timber; erosion control on areas disturbed by logging; use of logging methods that will minimize erosion; reseeding; and closing to travel vehicle routes that will not be needed after logging.

Research points out that in some timber-producing areas cutting can be manipulated to increase water yield. The forest manager must decide on the desirability of such practice in the overall effectiveness of management and in the water needs of the dependent areas.

Logging Equipment Study
Payette National Forest

Rushing waters – potential for power, irrigation, civilization

On the Bridger Wilderness Area
Bridger National Forest

"Superb natural beauty on top of the world – Bridger Wilderness Area."

Outstanding for beauty is the Bridger Wilderness Area with its hundreds of high mountain lakes and rushing crystal-clear streams carrying water into America's great Colorado River system. Such areas are natural habitat for big game animals and many wildlife species. In the summer, this and other similar areas afford fine opportunities for wilderness type recreation, including riding, hiking, fishing, and hunting.

Lakeshore and timbered areas of the Bridger Wilderness are maintained in their natural condition; no man-made improvements are permitted save those necessary to administer and protect the area. Recreation use is made possible by providing foot and horse trails into various parts of the area. Only simple type recreation and sanitary facilities are provided. Where livestock are grazed in wilderness areas, the management objective is to use the forage resource so that watershed and other values will remain unimpaired.

"Multi-Resources."

Deer survival in the Intermountain Region generally depends upon key winter range like that shown above the valley, although game forage on summer rangelands may at times also pose serious multiple-use problems. Much of the Cache National Forest area comprises such woodland brush zone, highly valuable for livestock and game forage as well as for its prime function as principal water source for the adjacent farm communities and cities of northern Utah. The practice of multiple use on such areas considers a long list of management items. Some of them are fire protection to preserve deer and livestock foraging areas and the precious watershed values, balanced grazing by deer and livestock without deterioration of soil and watershed values, checking of mineral locations for legal entry, and maintenance of surface values in mining areas.

Forest and farm have close ties in the Intermountain valleys.

Sunday afternoon at Pineview Reservoir
Cache National Forest

Under multiple-use management, timber producing areas are also important for wildlife habitat.

In civilization and out
Salmon National Forest

"Twin crops – timber and recreation."

Proper harvesting of timber in rough mountainous country is one of the challenging and difficult problems. Management techniques must assure a continuous crop of timber, as well as maintain a protective tree cover that is especially vital on steep slopes subject to serious erosion. Soil suitability is a major consideration in harvest of timber on rugged terrain. It is important that all multiple-use values be considered on an area where hunting, grazing and logging go hand in hand.

Along the famous Middle Fork of the Salmon "River of No Return" boat trips downstream are becoming increasingly popular. In administering this use, adequate sanitation at selected stopping places along the shore increases public safety and enjoyment.

"Products of multiple-use management."

Broad ranges and aspen-sheltered streams are characteristic of the Humboldt National Forest. Frequently we find camping, hunting, and livestock grazing occurring on the same areas.

Though life may be simple out in the wide open spaces where cares and worries are left behind, the task of preserving this element of simplicity is a complex management job.

First of all, the land manager's job in order to coordinate these multiple uses into a harmonious unit, is to determine the extent to which the rangelands may be grazed without damaging watershed values. When selecting locations and determining standards for roads and trails, public recreation and harvesting of wildlife resources are important considerations. Into the management plans also are woven the wildlife and fish habitat needs, proper livestock and wildlife forage utilization methods, and the protection and management of timber stands. Included in the management practices are improving livestock forage through revegetation on usable areas, rotation of grazing use, maintenance of deer herds in balance with food supply, and protection of the wildlife habitat.

Grazing on the Snake Range is just one of the multiple uses.

Camping on Baker Creek – a stone's throw from the desert.

Trophy of the hunt
Humboldt National Forest

Upswing in recreation
Dixie National Forest

"Operation Outdoors – for four times the recreationists in the year 2000."

Navajo Lake campground, an area with outstanding scenic attractions in southern Utah, has for the past year or two been the scene of a busy facelifting project under the Forest Service Operation Outdoors Program.

Navajo Lake is a living example that stored water in the Intermountain Region is a boon not only to agriculture and industry, but to recreation. Trees that would have been below waterline were removed to make the area more attractive and usable for boating and fishing. Careful planning for multiple uses has assured that the back areas as well as the shoreline will remain open for public use and for the development of camping and picnicking facilities as needed.

In the Intermountain Region, where water is precious and in demand for many uses, it is essential that all multiple-use values be considered and coordinated to protect them to the fullest extent possible.

"Proper harvesting of timber is compatible with other forest uses."

Watching and feeding the large trout at Big Springs is one of this national forest's popular attractions. Daily, during the vacation season, people from the world over fascinatedly watch the big "lunkers" rise to snatch pieces of bread. Protection of this valuable resource, of course, means protection of the source of Big Springs itself. Here several important land uses must be considered. For example, the banks are maintained in their natural condition and the shoreline is kept free of artificial developments. Sites utilized for recreation development are usually back from the waterfront to permit public access along the shore.

This area is rich in timber resources, but timber is being harvested so that use of livestock forage, wildlife, recreation, and water resources is compatible on the same general areas.

For a Wisconsin paper mill

Watching the fish at Big Springs – a popular sport at Island Park.

Targhee National Forest

Off the beaten path

Fishlake National Forest

"Under multiple-use management there is a place for you."

Scenes like this are becoming increasingly familiar on the Intermountain national forests. Lands formerly devoted entirely to grazing, especially those along streams, are echoing the sound of the fisherman's and camper's motor vehicles designed to traverse terrain still inaccessible to touring cars. The modern camper, fisherman or hunter leaves the paved highways and penetrates deep into the back country. Livestock are becoming accustomed to such uses which form a composite part of the multiple-use picture.

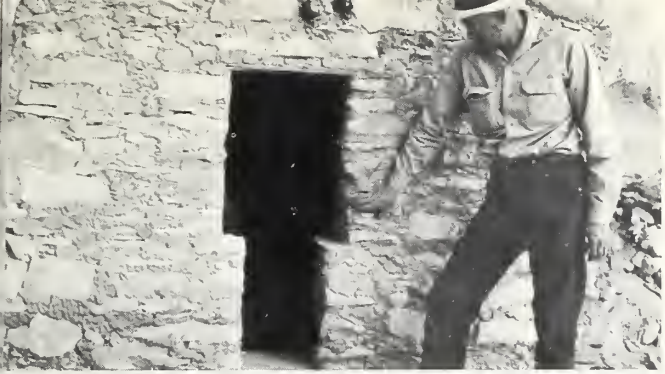
Major management objectives in such areas are to protect the watershed by keeping soil disturbance at a minimum, to increase forage yield and to provide for as many coordinated and harmonized uses as possible. This requires careful planning and development of an adequate transportation system and recreation facilities.

"Reservoirs like Palisades are always popular."

Palisades Reservoir on the Snake River is a good example of multiple-use planning in a "water influence zone," devoted primarily to public recreation. Facilities are held to a minimum along shorelines.

Roads in water influence zones are constructed to aid development and to further public enjoyment of the recreation resources. Where grazing and public recreational uses occupy parts of the same areas as often occurs, special management features such as fencing, control of trailing, and modified grazing seasons are used. Full account is taken of recreation, fish and wildlife habitat including maintenance of riparian vegetation and tree planting needs. Thus, every value and management practice is given its full weight in balancing the uses to meet multiple-use management objectives.

Water influence zone
Caribou National Forest



Ancient culture

Mule Deer
Manti-LaSal National Forest

"The past preserved for the education of the future."

Ancient civilizations have left evidence of their culture in the form of such structures as this Anasazi (prehistoric Pueblo) dwelling in Hammond Canyon, in paintings on the rocks in many parts of the Intermountain Region, and in the relics of their cultural activities. Under management for multiple use, valuable archeological, historic and scenic values frequently take preference in the overall management plan.

Manti-LaSal National Forest ranges comprise some of the nation's finest Mule Deer hunting areas. Since World War II, these hunting areas have attracted growing numbers of huntsmen from Texas, California, and other southwestern states, as well as from Utah. Maintenance of favorable rangelands and the proper balance of forage and wildlife is an essential part of the multiple-use concept of land management.

"Jackson Hole – embraced by productive forests, and scenic beauty."

Jackson Hole, seen here from the top of Teton Pass, is one of the famous vacationlands in the United States because of its genuine western flavor and endless opportunities for outdoor mountainland recreation. The high country seen in the distance, the Teton National Forest, is nationally known as one of the nation's outstanding recreation, scenic, and big game producing areas. It is important too as a watershed for the mighty Snake River. Livestock grazing is also basic to the local economy. Because of these and other multiple-use values, a coordinated plan of management is essential.

Watersheds for the Mighty Snake
Teton National Forest

Redfish Lake
Sawtooth National Forest

"Outstanding for scenic beauty and all forms of outdoor recreation."

On the Sawtooth's forested areas where recreational use is highly important, administration of all the resources to best serve the public is especially complex. Scenic beauty enjoyment, outdoor recreation, hunting and fishing, grazing, and timber production, along with watershed protection are the major activities.

Logging practices and insect and disease control are very carefully adapted to harmonize with recreation and wildlife values. Improvements such as roads, powerlines, and buildings must be located to prevent undue interference with other values. Fencing is frequently necessary to obtain proper control of grazing.

Mineral resources are administered according to the mining laws and usually can be harmonized with other uses.

"Timber protection is an important phase of the multiple-use program."

Forest insects and diseases know no man-made boundaries. Thus, in the protection of multiple-use values, we frequently find private, state, and federal foresters coordinating efforts to protect the timberlands under their care. Federal and state foresters recently joined forces to control a threatening epidemic of mountain pine beetle in the extremely valuable ponderosa pine stands that surround Lake Tahoe.

Forest destroying pests affect multiple-use management in many ways. Timber production areas can be severely reduced. Forests destroyed by insects, diseases, or fire are unsightly, but more importantly watershed, timber, and recreation values are damaged in direct ratio to the seriousness of the destruction.

Inspecting Insect-Infested Trees
Toiyabe National Forest Supervisor
and Nevada State Forester

Patterns of Progress
Uinta National Forest

"Watershed restoration through contour trenching and revegetation is effective as well as dramatic."

Contour trenches on watersheds are becoming a familiar sight to national forest travelers in the Intermountain Region. Such projects are increasingly important because of the vital function they perform – the delivery of clear, usable water to farm, community, and city, and the control of floods.

Water is the national forest's number one crop. Consequently, in multiple-use management, water yield and regulated delivery receive attention consistent with their importance. Disturbance of soils is kept to a minimum, and vegetation which will best prevent erosion is maintained. Research continuously adds to our understanding of watershed functions and to the best-suited vegetative cover.

"Winter Wonderland."

Development of a popular winter resort requires many multiple-use management considerations because, while preserving the physical aspects and natural beauties, such areas must serve the greatest number of people and not pollute water supplies. For example, at Brighton attention to water needs for Salt Lake City is given highest consideration in multiple-use planning.

The Forest Service avalanche study and forecast center at Alta ski area is recognized as one of the foremost in the world. Public safety, including avalanche control, is a primary consideration and objective on all national forest winter sports areas.

The "Snow Avalanche Handbook" was recently published by the Forest Service for the guidance of "Snow Rangers" and others concerned with avalanche hazards.

Brighton Ski Resort
Wasatch National Forest

Highway Through Lands Of
Multiple Use – Wasatch National Forest

INTERMOUNTAIN REGION

HIGHLIGHTS FOR 1960

Multiple-Use Highway Dedicated

In September, Utah Governor George D. Clyde dedicated the new "Multiple Use" forest highway through the Wasatch National Forest. Dedication was at the junction near Mirror Lake, and speakers described the highway as symbolic of the path of forestry in America and the world today.

National Grassland

Nearly four million acres of former "Land Utilization Project" lands were designated National Grasslands last June in a move to give them permanent status and assure wise long-term use of their natural resources. Originally these areas made up part of the famous "dust bowl" lands of the Western and Midwestern United States. Of these, 49,770 acres in Oneida and Power Counties, Idaho, will be administered by the Caribou National Forest under the multiple-use sustained-yield management principles.

Land Transfers

The Dixie National Forest in Utah was enlarged October 27, 1960, when the President signed an Executive Order dividing the

Widtsoe Land Utilization Project, formerly jointly administered by the Departments of Interior and Agriculture. Under this order, 11,783 acres of Federal lands were added to the Dixie National Forest and 14,825 were transferred to the Department of Interior. The action will simplify administration for both Departments.

New Wilderness Area

The Secretary of Agriculture approved establishment of the Bridger Wilderness Area – a 383,000 acre region of unusual scenic beauty in the Wind River Range in the Bridger National Forest. The area, all above 7,600 feet elevation, includes 30,000 acres of lakes and the 13,785-foot Gannett Peak, highest mountain in Wyoming.

World Foresters Visit

The Fifth World Forestry Congress, largest international gathering of forestry experts in history, was held in Seattle, Washington, August 29 through September 10 to advance the science and practice of forestry throughout the world. Its central theme was "Multiple Use of Forest Lands." Following the Congress, 80 forestry experts from various parts of the world toured the region to observe multiple use in action. National Forests on the itinerary were the Teton, Targhee, Bridger, Caribou, Cache, and Wasatch.

Smokejumper Loft Dedicated

The new smokejumper loft at McCall, Idaho, was dedicated July 16 with Senator Henry Dworshak as principal speaker. Congresswoman Gracie Pfost also attended and participated. Visitors present viewed the new loft, toured the area, and observed aerial attack demonstrations. The smokejumping unit serves areas in north-central Idaho, northwestern Oregon and a small portion of Montana.

Director Reed Bailey, Intermountain Forest and Range Experiment Station, explains the Davis County watershed story to the world foresters.

Practice jumping

Beetle Control

About 57,000 lodgepole pine trees were leveled by tractor last fall to combat mountain pine beetle on the Uinta Mountains of the Wasatch National Forest. The project was undertaken after thorough investigation and study by the region and the Intermountain Forest and Range Experiment Station. Part of a 100,000-acre treatment program beginning in 1958, the unusual clean-sweep operation was obligatory because of intense, localized infestation. The treatment which ran only one-fifth the normal spraying cost is expected to improve big game habitat, avert fire problems, and pave the way to a new crop of timber. Performed on relatively flat ground, with erosion control structures wherever needed, soil loss and watershed damage will be prevented.

Moose Creek Timber Sale

The largest lodgepole pine timber sale not only in the region's history but in the history of the entire Forest Service was made in July. It involves 318 million board feet of timber on the Moose Creek Plateau near Ashton, Idaho, on the Targhee National Forest. The sales contract calls for construction of a special manufacturing plant for converting small logs into valuable products.

Visit by the National ORRRC

The Outdoor Recreation Resources Review Commission and its Advisory Council observed recreational facilities and opportunities on several national forests in July. Members of the commission which was established by Congress to study the nation's outdoor recreational needs and potential through the year 2000, were taken on three field trips in the Bridger, Caribou, Targhee, and Teton National Forests. The trips featured opportunities for all forms of outdoor recreation and progress on the National Forest Recreation Survey – a program for determining recreational needs and opportunities on national forests throughout America.

Windrows of infested trees ready for burning. A planted forest will soon grow here.

National Grassland.

Lodgepole Pine – Moose Creek Sale Area.

Members of the Outdoor Recreation Resource Review Commission and their Advisory Council listen to an explanation of national forest recreation activities at Flatrock Campground, Targhee National Forest.

SOME MAJOR 1960 ACCOMPLISHMENTS

Water and Soil

In watershed rehabilitation, 17 projects were active during the year – of which about half were completed. Improvement work included seeding of about 2,500 acres and construction of about 200 miles of contour trenches, which will give protection to cities and towns, reservoirs, and municipal water.

Under the small watershed protection program authorized by Public Law 566, watershed restoration measures were installed on about 1,000 acres of national forest lands on the North Fork project (Cache National Forest) and the American Dry Fork project (Uinta National Forest). Numerous other watershed improvement projects are being developed cooperatively with the Soil Conservation Service under this program.

Distastrous fires during the summer of 1960 were followed by the seeding of 14,400 acres of grasses on ten projects in Utah, Idaho, and Nevada. In addition, contour trenches were constructed to stabilize the soil and improve the sites for tree planting on 1,900 acres.

Soil survey activities on national forest lands in the region continue on an exploratory basis. The soils on some 135,000 acres of the Wasatch National Forest were classified and mapped during the past field season. Technical soil studies such as these are being made to provide sound information for guiding multiple-use management.

Timber

During 1960 the national forest timber resource contributed almost 360 million board feet to Intermountain economy, an increase of 22 million board feet over 1959. Revenues to the United States Treasury from this harvest were about 3½ million dollars.

The region's timberland rehabilitation program included establishment of seedlings at the new forest tree nursery near Boise, Idaho, tree planting on 1,900 acres and contour trenching on 2,810 acres of burned area preparatory to planting about 1½ million ponderosa and Jeffrey pine seedlings next spring.

Timber surveys were completed on about 2 million acres and will aid in the orderly removal of forest products on a sustained yield basis.

Mountain pine beetle activity increased throughout the region in 1960. The major infestation is on the Wasatch National Forest and contains 280,000 infested trees. New treating methods are lowering costs and increasing efficiency of control. Aerial application of virus was used for the first time in this region for biological control of the Tussock moth.

Forage

During 1960 about 298,000 cattle and roughly 1⅓ million sheep grazed the rangelands. Regional grazing receipts of slightly more than one million dollars were paid to the United States Treasury for the Fiscal Year.

Range improvement accomplishments for Fiscal Year 1960 included the construction of 105 miles of range fence and 107 stock watering developments.

More than 38,000 acres of sagebrush-producing land capable of growing greater volumes of choice forage plants was treated by aerial application of herbicide to kill the sagebrush. Grass was planted on portions of the treated areas. Spraying is largely performed with 2, 4-D butyl ester, which provides excellent sagebrush control. On large-scale herbicide spraying projects, coordination among the land and resource managing agencies as well as private owners is essential to insure proper considerations of wildlife, recreation, timber and watershed values.

Several new types of range improvement equipment were put into use in 1960. Notable among these are the browse seeder and the helicopter for herbicide application on undesirable vegetation.

Wildlife

In recent years the Intermountain national forests have supported more than 25 per cent of the estimated total big game harvest on national forests of the United States, a real tribute to the cooperative effort and management among the states, the private landowners, and the federal land managers. As a result, hunter visits to the Intermountain Region during 1960 were estimated in excess of 550,000. Estimated fisherman visits for the same period exceeded 1,500,000.

Wildlife habitat management yearly becomes more complex and occupies an increasing part of multiple-use management concepts and consideration because of the national forests' well earned reputation as the public's hunting and fishing grounds.

Cooperative and other habitat management accomplishments during 1960 were:

485 acres of big game range revegetated; 210 acres

of game range habitat improved*; 1 mile of stream bottom protected by fencing; 105 acres of new fishing lakes*; 4 miles of stream improvement; 24 miles of special hunter access roads; and 12 study enclosures constructed.

Recreation

Public recreation use on the region's 18 national forests is accelerating rapidly. Visits during 1960 exceeded 10,200,000 – 11.2 per cent above the number for 1959. During the past decade this number of visitors to the national forests has increased by more than 250 per cent.

Some 55 resorts and 21 ski areas were operated by concessionaires under Forest Service permit during the year. Facilities provided by private capital to accommodate the recreationists are of increasing importance.

To keep pace with increased public interest and use of the national forests for recreation, 12 campgrounds were constructed last year, 21 were enlarged, and 44 completely renovated. More than 578 family units have been rehabilitated, and 567 more have been constructed. Layout and design plans were completed for 60 additional recreation sites. Adjacent to the new Flaming Gorge reservoir within the Ashley National Forest in northeastern Utah, a good start has been made on a program calling for an eventual 66 campgrounds, 15 scenic areas, and four boat ramps.

The National Forest Recreation Survey was completed on all forests in the region last year to determine lands needed, suitable and available for outdoor recreation throughout the remainder of this century.

Lands

As of June 30, 1960, the region administered some 30.8 million acres of publicly-owned lands. To help consolidate national forest and private lands (roughly seven per cent of the area within national forest boundaries is privately owned) 13 land exchanges were made during the year. Under a special act of Congress authorizing the purchase – on a matching basis – of steep, flood-producing land within the Cache National Forest, some 543 acres were acquired.

More than 5,200 national forest special use permits and easements were in effect June 30, 1959, covering 236,000 acres in the Intermountain Region, for such uses as telephone and powerline rights-of-way, roads, resorts, reservoirs, pastures, winter sports, radio, and TV sites. In addition, 54 Federal Power Commission licenses authorizing the generation or transmission of hydro-power were in force.

Minerals

National forests of the Intermountain Region contain large deposits of a variety of minerals essential to economic security and national defense. Among the most important of these are brucite, magnesite, uranium, gold, silver, lead

* Work performed by states on national forest lands.

zinc, mercury, tungsten, and beryllium ores. Areas on the Challis National Forest contain large reserves of lead, zinc, and cobalt ore; the Caribou National Forest has extensive phosphate deposits, while the Manti-LaSal National Forest contains important oil, uranium, and gas deposits.

During 1960, about 5¼ million acres were processed for surface rights determination, bringing the total to about 25¼ million acres. Mineral examinations were made on 769 claims, representing about 16,000 acres. A total of 4,000 claims on about 85,000 acres have been examined since Public Law 167 was enacted in 1955. Mining claimants have retained surface rights on about 20,000 acres.

During 1960, some 900 applications for oil and gas leases on national forest lands were received from the Bureau of Land Management for report and recommendations. Five hundred and seventy oil and gas leases covering 723,000 acres were issued by the Bureau during the year, raising the area of national forest under lease to over 5 million acres.

Five oil and gas unitized areas were formed covering nearly 80,000 acres. Of 98 exploratory wells drilled throughout the region, 13 yielded commercial gas.

Fire Control

Fire weather throughout the Intermountain Region during 1960 was critical. Drouth and hot weather brought the fire season on a month earlier than normal, extending it through June, July and most of August.

There were 720 forest fires started by lightning during 1960, highest in five years. The 1960 total of man-caused fires was 347, exceeding both the 5-year average and the number in 1959.

Mid-July in Idaho brought 19 large, costly fires that burned about 34,500 acres, much of which was commercial timberland.

Aerial attacks on fires reached an all-time high in 1960. Four helicopters contracted for firefighting transported initial attack (helitack) crews and other personnel to fires, retrieved smokejumpers, and did scouting. Aerial tankers also played an increasingly important role dropping

fire retardants.

Smokejumpers made 466 fire jumps during 1960 as compared to 343 jumps the previous year.

Engineering

To help keep multiple use "in action" during 1960, the Division of Engineering completed 800 miles of road and trail surveys – constructed and improved 448 miles of roads, 22 miles of trails, 68 bridges and 1 airfield. As an aid to resource management, planimetric mapping controls were accomplished on 8,563 square miles. To provide engineering services for an expanding development program, greater use is being made of the tellurometer, photogrammetry, and machine data processing.

Multiple-use management of the national forest resources also includes development and use by private individuals and groups. Thus, as a further service, Forest Service engineers review and approve design and construction of power developments, irrigation and flood control dams and structures, and lodges and resorts. Annual inspection and testing of ski lifts and tows at such well-known resorts as Alta, Brighton, Sun Valley, Jackson Hole, and Reno Ski Bowl are other related important jobs required of Intermountain Region engineers.

Money Returned to the States

Receipts from the sale of Intermountain national forest timber and forage resources, from land uses, powersite rentals, and trespasses, deposited in the United States Treasury for Fiscal Year 1960 were about $4,620,000. Each year, the states receive 25 per cent of national forest receipts which are returned to the counties in proportion to the acreage of national forest land they contain. Thus, from the 18 Intermountain national forests the states of Idaho, Wyoming, Utah and Nevada received more than $1,152,000 for distribution to counties containing national forest land. This money, a product of multiple-use management, is used by county governments to help finance school and road programs.

THE MULTIPLE-USE LAW

Public Law 86-517
86th Congress, H. R. 10572
June 12, 1960

AN ACT

To authorize and direct that the national forests be managed under principles of multiple use and to produce a sustained yield of products and services, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it is the policy of the Congress that the national forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes. The purposes of this Act are declared to be supplemental to, but not in derogation of, the purposes for which the national forests were established as set forth in the Act of June 4, 1897 (16 U.S.C. 475). Nothing herein shall be construed as affecting the jurisdiction or responsibilities of the several States with respect to

NATIONAL FORESTS, MANAGEMENT.

30 STAT. 34.

wildlife and fish on the national forests. Nothing herein shall be construed so as to affect the use or administration of the mineral resources of national forest lands or to affect the use or administration of Federal lands not within national forests.

MULTIPLE USE; SUSTAINED YIELD.

Sec. 2. The Secretary of Agriculture is authorized and directed to develop and administer the renewable surface resources of the national forests for multiple use and sustained yield of the several products and services obtained therefrom. In the administration of the national forests due consideration shall be given to the relative values of the various resources in particular areas. The establishment and maintenance of areas of wilderness are consistent with the purposes and provisions of this Act.

Sec. 3. In the effectuation of this Act the Secretary of Agriculture is authorized to cooperate with interested State and local governmental agencies and others in the development and management of the national forests.

Sec. 4. As used in this Act, the following terms shall have the following meanings:

DEFINITIONS.

(a) "Multiple use" means: The management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

(b) "Sustained yield of the several products and services" means the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the national forests without impairment of the productivity of the land.

Approved June 12, 1960.

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THE NATIONAL FORESTS OF THE INTERMOUNTAIN REGION